

THE macdonald JOURNAL

JUNE 1978





OVERSEAS EMPLOYMENT OPPORTUNITIES

- Ag. Extension Workers for Colombia, Thailand, Ghana.
- Animal Scientist for Sierra Leone, Tanzania, Thailand.
- Soil Scientist for Botswana, Peru.
- Ag. Economists for Papua New Guinea, Tanzania.
- Ag. Science Teachers for Botswana, Papua New Guinea, Caribbean.
- Ag. Engineers for Bolivia, Ghana, Nigeria.

contact: **CUSO Recruitment, 151 Slater, Ottawa, K1P-5H5**
or Box 237, Macdonald College, P. Que. H0A 1C0

THE macdonald JOURNAL

JUNE 1978

Volume 39, No. 6
June, 1978

Editor: Martin van Lierop,
Agronomist
Managing Editor: Hazel M. Clarke
Contributing Editors:
Jim Feeny
Macdonald Reports
J. B. Roy, Agronomist,
Information Division,
Ministry of Agriculture of Quebec
Business Manager:
Martin van Lierop

The Macdonald Journal is published every month by Macdonald College.

Material in this issue may be reprinted editorially without permission; however, credit to the Macdonald Journal would be appreciated. Address all inquiries re editorial matter, advertising, and subscriptions to: The Editor, Box 237, Extension Department, Macdonald College, Quebec, H0A 1C0. Second class mail registration number 0463.

Subscription rates are \$3.00 for one year, \$5.00 for two years, and \$7.00 for three years in Canada. Outside Canada — \$7.00 for two years.

Printed by Harpell's Press Cooperative, Gardenvale, Quebec.

In This Issue

Cover: More improvements in Quebec's dairy herds in past 10 years than in previous 30... for article see page 3.	2
Editorial	2
Dairy Herd Improvement in Quebec	3
The Macdonald Livestock Show	6
Should You Incorporate Your Farm Business?	8
In Defense of the Environment	12
McLennan Travelling Libraries	13
The Family Farm	14
This Month with the QWI	17

Journal Jottings

Mr. Tom Pickup's name first appeared in the Family Farm section supplied by the Quebec Ministry of Agriculture in 1961, but he had been working on the pages for years before that having joined the Quebec Government in 1957. It is with regret that we remove his name from the masthead, but after a long and varied career, Mr. Pickup deserves the retirement he has now been enjoying for the past few months.

Tom Pickup, who was born in Blackburn, England, came to Canada in the late '20s and farmed in Alberta until 1937. After serving in the Canadian army from 1939 until 1945, he received his BA and MA from McGill University. He came to Macdonald for his M. Sc., which he received in 1956. With an agricultural background and a proficiency in languages,

Tom Pickup was a natural for the Information Office of the Ministry of Agriculture.

Although I have not met Mr. Pickup, I enjoyed working with his meticulously translated copy and appreciated his desire to send us the best and most up-to-date information available. I know that his work for the Journal was but a small part of a very busy schedule, but during the 20 years he was associated with the magazine, it never suffered because of more pressing demands on his time.

Many on Campus remember him as a student — I am certain that they and our readers will join us in wishing him well.

Have you considered incorporating your farm? Who should? Why? What are the pros and cons? Marcel Couture's article in this issue answers some of these questions and suggests where you should go for further assistance in making this decision. We thought of asking Mr. Couture, who is Assistant Director of the Diploma Program, for this article after glancing through his textbook, "Farm Business Management". As well as teaching and writing, he also gives a popular evening course. You will be reading more about this and other Extension Evening Courses in the next issue.

Hazel M. Clarke

In 1972 a Union des Producteurs Agricoles (UPA) and Quebec Farmers' Association (QFA) ad hoc committee was created. Its main objective was to improve communications and to initiate a rapprochement between the two organizations in Quebec. At this time as well, Bill 64 which was sponsored by the then Union Catholique des Cultivateurs (now UPA), was going through its legislative route and — became law in 1972. This Bill granted UPA special privileges and above all, it legislated UPA as the only farm organization legally representing all farmers in the province of Quebec. At this point it became obvious that a continual dialogue should be maintained between the two organizations. The QFA which evolved from the Radio Farm Forum era, is still a rural based organization which groups mainly English speaking rural people throughout this province. The UPA was not aware of the specific information needs and problems that the English speaking farmers encountered in Quebec. It welcomed the possibility of establishing better communication with its minority constituency. The result of the ensuing exchange of ideas and the eventual solutions to problems posed by QFA has benefited all English speaking farmers. These meetings enabled UPA to institute specific programs and projects that are oriented to assist the English speaking farmers to integrate and participate in their organization.

A major effort by the UPA has materialized over the past few weeks. For the first time the *La Terre de Chez-Nous*, the UPA paper, is publishing a special issue containing a page written in English. This endeavour stems from a request that has been on the agenda of the UPA-QFA committee for a number of years. The gesture on the part of the UPA is genuine and sincere. Their intent is to make sure that the English speaking farmers are aware of the UPA programs and policies. This commendable undertaking merits the support from all the English speaking community in Quebec. As noted above, it is a project and the English page appears in a special issue of *La Terre de Chez-Nous*. The special issue is being mailed to some, however, there remain many farmers who are not aware of this particular issue. It may be obtained at a local UPA federation office by requesting a special English subscription form.

There may not always be unanimous agreement or acceptance of UPA policies but this unique opportunity to become informed and ultimately participate as an English speaking farmer in the decision-making process of this organization should not be rejected. The chance to contribute towards the evolution and improvement of the agricultural industry is real. The UPA has acknowledged the rights of the English speaking farmers, who must now take the responsibility to respond and show interest on their part.

Martin van Lierop

Dairy Herd Improvement in Quebec

by Professor J. E. Moxley,
Department of Animal Science

Quebec dairy farmers have made more improvement in their dairy herds in the last 10 years than they did in the previous 30 years. There are many factors which have led to more rapid improvement. They include higher levels of feeding, particularly meal and silage, the development of larger, more efficient size of herds, the use of better sires, and more extensive use of milk recording programs with management information.

When the DHAS program was introduced at the Montreal Show-mart in February, 1966, Vermont dairymen were present to explain their Dairy Herd Improvement program. One Vermont dairyman was overheard telling a newly arrived fellow countryman, "For God's sake don't tell them your herd average; they will never believe you." Today several hundred Quebec dairymen have exceeded that Vermont farmer's herd average.

Very few urban businessmen appreciate the complexity of a dairy farm operation. A dairy farmer is faced with an array of complicated decisions daily. To be successful, a dairyman requires a broad range of knowledge or sources of information. Between 1966 and 1976, the average capital value of Canadian farms rose from \$44,300 to \$144,500 per unit. This has necessitated the use of more sophisticated record keeping to plan for more efficient operations.

Quebec dairymen have demonstrated the need for and the value of a milk recording program with management information. Today about 200,000 cows are enrolled on the DHAS program. Where only about 10 per cent of the dairy cows were enrolled on a milk recording program in

1968, today over 30 per cent are tested on a milk recording program in Quebec. Only Cornell University and Wisconsin process significantly more herds than DHAS in North America.

Some appreciation of the inputs and outputs for high and low producing herds can be obtained by looking at some of the 1977 summaries. In Table 1 Quebec Holstein herds below 4000 kilograms and above 6000 kilograms are compared.

Table I. Comparison of DHAS Holstein herds for the year 1977 with high and low production

	Under 4000 kg milk/cow	Over 6000 kg milk/cow	Difference %
No. of herds.....	391	261	
Average herd size (cows).....	32.2	41.7	+ 30
Production/cow (kg).....	3,621	6,393	+ 77
(lb).....	7,976	14,082	-
Days in milk (days).....	277	309	+ 12
Average cow weight (kg).....	473	546	+ 14
Feed Intake			
Meal (kg).....	1,160	2,212	+ 91
Silage (tonne).....	1.25	4.25	+ 240
Hay (tonne).....	2.5	2.2	+ 12
Production Measures			
Value of milk/cow(\$).....	791	1,495	+ 89
Feed cost/100 kg milk(\$).....	11.03	9.40	- 15
Milk production/man/gr (tonne)	85	169	+ 99

The 391 herds under 4000 kilograms of milk per cow per year tend to be herds that have been on test for a short period of time. The 261 herds over 6000 kilograms of milk per cow per year have an average time on test of over six years. A comparison of these two groups indicated that the high producing herds were feeding nearly twice as much meal per cow and considerably more roughage. The financial advantages are also rather obvious. The high producing herds had an extra \$700 income from milk per cow per year. It cost \$1.63 less to produce 100 kilograms of milk in the high producing herds. Production of milk per man unit was double that of the low producing herds. The gross returns from milk would be \$28,000 higher per year

for a 40-cow herd in the high production group as compared to the low production group.

Dairy farmers are generally interested in finding out what changes they can make which will be most effective in improving production. During 1977, some studies were made to determine why some herds made rapid improvement while others made

small gains each year. These were the main observations.

1. Increasing feed intake was the single most important factor in improving production.
2. Herds with an above average rate of improvement were increasing production by 184 kilograms (405 pounds) of milk per cow per year.
3. As might be expected, herds with lower initial production levels made the most rapid gains.
4. Herds with below average rates of improvement tend to be those with more frequent mastitis problems and failed to make significant changes in feed intake.

5. The herds that made above average improvement in production appeared to be making more progress in improving the genetic quality of their herds.

We can get a clearer picture of what is happening and what can happen in the Quebec dairy industry if we examine genetic improvement, feed efficiency, reproductive efficiency, health and management separately.

Genetic Improvement

Genetic change is achieved through selection and use of sires on a population basis and females on a within herd basis. Most of the improvement comes through sire selection and use. In 1973, the Quebec Department of Agriculture supported the initiation of the official DHAS program primarily to increase the number of bulls that could be tested for production. This has doubled the number of young bulls the Quebec Artificial Insemination unit can test each year. Over 50 per cent of the dairy cow population is now bred by A. I. and an increasing supply of proven bulls will increase the quantity of semen from better bulls.

In a number of studies of DHAS herds, it has been noted that about 65 to 70 per cent of the cows culled in DHAS herds were below the average of the herd. By selecting replacements only from the top half of the herd and using A. I. sires effectively, a dairymen can be expected to improve his production by about two per cent per year. In a study covering 1966 to 1972, Dr. Brian Kennedy, DHAS Research Director, noted that A. I. sire use in DHAS herds would be contributing about 57 kilograms increase in milk per cow per year. DHAS herds were making more effective use of A. I. than non-tested herds.

Animal identification has been neglected in Quebec herds. Even in a commercial herd proper identification is essential to properly evaluate animals and to avoid the possibility of inbreeding.

When A. I. is used, a grade cow with an identified sire may be worth considerably more simply because she has been properly identified at birth.

Since DHAS is more than just a production recording program, it is possible to look at other ways of genetic improvement of herds. The introduction of mastitis testing in 1977 will allow us to see if cows can be selected for resistance to mastitis. With proper identification of service sires we should be able to provide more information on the effect of sire on calf size at birth and identify bulls which may be producing calves which are abnormal. It should also be possible to identify more clearly reproductive problems of genetic origin.

Feed Efficiency

Feed intake is the most frequent limiting factor in milk production. The effect of level of feed intake in production was well illustrated in Table 1. DHAS herds have generally made their biggest gains by increasing meal intake to the cows which benefit from increased feed at the right stage of lactation. Table 2 shows the relationship between production per cow in DHAS herds and meal fed.

Over the past year there seems to be a change in practice. Dairymen appear to be reducing herd size slightly and feeding smaller herds more efficiently.

All herds and particularly the higher producing herds can benefit from better quality of roughage. Table 3 illustrates how excellent quality roughage can reduce the amount of meal required. A cow capable of producing around 6,500 kilograms of milk will need about two metric tonnes of meal with average roughage. If excellent roughage is available, the meal required will be reduced by almost half to just over one tonne of meal. For herds aiming for higher levels of production, improving roughage quality is essential. Roughage quality is an area that has been neglected by many Quebec dairymen.

Herd Health

Mastitis is a major health problem in the dairy industry. It is claimed that 50 per cent of all cows in North America are affected by various forms of mastitis. A mastitis infection results in loss of production, costs money to treat, and results in a poor quality of milk which may not be acceptable on the market. The incidence of the disease can be reduced by using properly maintained milking equipment, having good sanitary milking practices, and identifying and treating or culling infected animals.

There are a number of ways to detect whether or not a cow has mastitis. Most of them are based on determining the number of leucocytes or white blood cells that are in the milk. When an infection or udder irritation occurs these leucocytes enter the milk to attack the bacteria. In 1976 a leucocyte or somatic cell counter (Fossomatic) was purchased by DHAS. This machine is capable of testing 180 samples per hour. This was the first machine of this kind installed in North America.

After a period of research with bulk tank and limited individual cow testing, testing services were offered to official DHAS herds. In official herds with animal identification we are able to study the inheritance of resistance to mastitis. A second Fossomatic unit was recently purchased and testing services will be offered regular DHAS herds very shortly.

Understanding what somatic cell counts mean is almost as complicated as learning the metric system. Somatic cell counts are expressed in cells per millilitre of milk. A cow or herd average below 250,000 cells/ml would be considered as free of mastitis. At 500,000 cells/ml this would indicate there is a problem. At 750,000 cells/ml a bulk tank sample has reached the point of unacceptable milk according to Quebec official standards. For individual cows, understanding

what is a satisfactory count is further complicated by the effect of stage of lactation. In early and late lactation cell counts tend to be high.

When all or most of the cows in the herd have a high cell count, it is a good indication of faulty equipment or unsatisfactory sanitary conditions. Incorrect or irregular vacuum, faulty pulsators and worn teat cup liners will result in high cell counts.

During 1977 the milking equipment and milking practices in official herds were studied. The average somatic cell counts in these herds was around 400,000 cells/ml of milk. The single most important practice that reduced cell counts was using a teat dip. Dairymen who used teat dips had cell counts that were 20 per cent below those who did not. The second most important practice which appeared to reduce mastitis was drying the udder before putting on the teat cups.

The inclusion of mastitis testing in a milk recording program is an economical and efficient way of providing this service. It is providing a base on which the veterinarian can work with the dairy farmer to maintain better herd health.

Reproductive Efficiency

Reproductive efficiency is a problem everybody talks about but nothing seems to happen. We have achieved spectacular developments in embryo transfer procedures but very little in conception rates. The calving interval, which is the average number of days between successive calving, is reported each test day on DHAS reports. The average calving interval for the low producing herds in Table 1 was 387 days. The high producing herds had an average calving interval of 397 days. Unfortunately, the average calving interval is not necessarily a good measure of reproductive efficiency. Some dairymen simply cull their reproductive problems. The 1976

Nova Scotia DHAS report indicates that 36 per cent of the cows were culled because of breeding problems. This would indicate that reproductive problems cause a considerable financial loss.

In DHAS herds, cows due to be bred and due to calve are identified but more detailed information on reproduction would be valuable to dairymen. Hopefully, through the cooperation of dairymen, the AI unit, and DHAS, we can develop some procedures that will lead to more accurate measures of conception rates, identification of service sires, identification of offspring and the type of calf produced. In this way we should be able to pinpoint more accurately the causes of reproductive failures.

The production, feeding, reproduction, and somatic cell counts provided by DHAS represents some of the information a dairyman needs to make efficient management decisions. This has been a major factor in enabling Quebec dairymen to maintain the same volume of milk production while reducing the dairy cow population by 20 per cent in 10 years. DHAS herds have demonstrated what can be done in the way of herd improvement. Looking across the border into the United States, where dairymen have had data processing services for a longer period of time, there appears to be ample opportunity for further improvement.

After 1½ years of unsuccessful programming for a U.S. DHI centre, a representative of a computer company was heard to remark, "What can be difficult about programming a bunch of cows?". In 1966 when DHAS was started there appeared to be many areas where new ideas and methods could contribute to providing useful services to dairy farmers. In spite of what has been done, there appears to be even more opportunity of developing these services and making them more useful to dairymen in the future.

Table 2. Relationship between production and feed intake in DHAS herds in 1977 by level of milk production.

No. of herds	Milk		Feed intake/cow		
	Production/cow	(kg)	Meal	Silage	Hay
208.....	3,179	1,037	0.9	2.4	
389.....	3,791	1,233	1.2	2.5	
719.....	4,270	1,413	1.9	2.4	
927.....	4,754	1,579	2.2	2.4	
761.....	5,226	1,753	3.0	2.3	
421.....	5,733	1,959	3.7	2.3	
190.....	6,221	2,418	4.2	2.2	
55.....	6,707	2,311	4.8	2.0	
17.....	7,294	2,646	3.6	2.2	
Average.....	4,795	1,604	2.4	2.4	

Table 3. Effect of roughage quality on meal intake during lactation in a 550 kilogram cow producing 3.5% milk

Month of lactation	Milk yield per day	Meal required with roughage	
		Average quality	Excellent quality
1.....	33	12	8
2.....	32	12	8
3.....	30	11	7
4.....	27	9	5
5.....	23	7	4
6.....	20	6	2
7.....	17	4	1
8.....	14	3	0
9.....	10	2	0
10.....	8	1	0
Lactation total.....	6,530	2,050	1,070

The Macdonald Livestock Show

by Jim Feeny,
Extension Department

With the summer fair season now well underway, the next few weeks are going to be busy ones for those people who exhibit animals at their local and regional exhibitions. The show stock must be trained, groomed, and otherwise generally prepared for the fair. A lot of hours are involved, even for the veteran exhibitor who has been showing for the last two or three decades.

Consider, then, the scene at the Macdonald College barns in the first week of last February as 135 students prepared their animals for the 31st Annual College Livestock Show. Many of these people, of course, were familiar with the procedure, having participated in 4-H and Young Farmers' programs at home. However, for most of the students taking part it was their first time in the show ring. The barn lights burned into the early hours of the morning as animals were washed, led, brushed, sheared, and washed again in preparation for the Show. Cries of "Where's my halter?" mingled with "Get off my foot, you stupid beast!"

The Livestock Show is an annual event at Mac. This year's was the largest ever, with the 135 exhibitors showing dairy and beef cattle, sheep, and swine. All animals are provided by the College farm except for the sheep and beef which are supplied by Dr. L. Johnson. There is no competition on type or conformation, as is the case at the local fair. The event is purely a showmanship competition. This means that how well the student does depends mostly upon how much work he or she has put into preparing the animal.

Of the four classes of livestock shown, the beef and sheep classes were the smallest. Most of the people who showed these animals had done so before. The dairy classes, divided into sections for experienced and novice showmen, are always very popular. Showmen are able to choose whether they will exhibit Holstein or Ayrshire cattle; they are not able to choose which particular animal they will show. These are assigned at random, in the interests of fair play.

The swine classes this year were the largest ever. One might suppose that the high pork prices on the commercial market might have something to do with this sudden interest, but the major reason for the large classes had little to do with economic forces. Professor Tom Hartsock teaches a course in Swine Production to students in the degree program in agriculture. This year, each of the 80 students taking the course had to show a pig.

I was a member of that class and remember well the outcry which the announcement of that bit of information sparked. Most students had never seen a pig shown and wondered how it was possible. Those of us who had seen it done still wondered how it was accomplished.

These initial doubts, though they never completely disappeared, were soon suppressed by a sense of challenge. Admittedly, pigs are rather intelligent animals; however, they had not had the benefit of a university education, and we students vowed that it would not be us who would lose the student-swine battle of wits.

We had some things in our favour. Because of the large number of

students in the class, Professor Hartsock decided that each pig would be shown by two students — there weren't enough pigs for every student to have his own. This gave us a manpower advantage: two students against one pig. We hoped that it would be sufficient.

There is a definite procedure to be followed in training a pig to show. First, we had to meet our animal. Macdonald pigs are identified by ear notches; each student had to be able to read these so that his animal could be differentiated from the others in its pen. Otherwise, one could end up spending three weeks training the wrong pig, only to discover the error the morning of the Show. This did happen to at least one pair of students.

Next, we had to name the pig. During the course of the training period we would have the opportunity to attach many different names to the animal, but it was felt that we should have at least one that would be socially acceptable. My partner and I finally settled on "Oliver"; other students showed considerably more imagination. Top honors in this regard went to the pair who labelled their pig "Tenderflake."

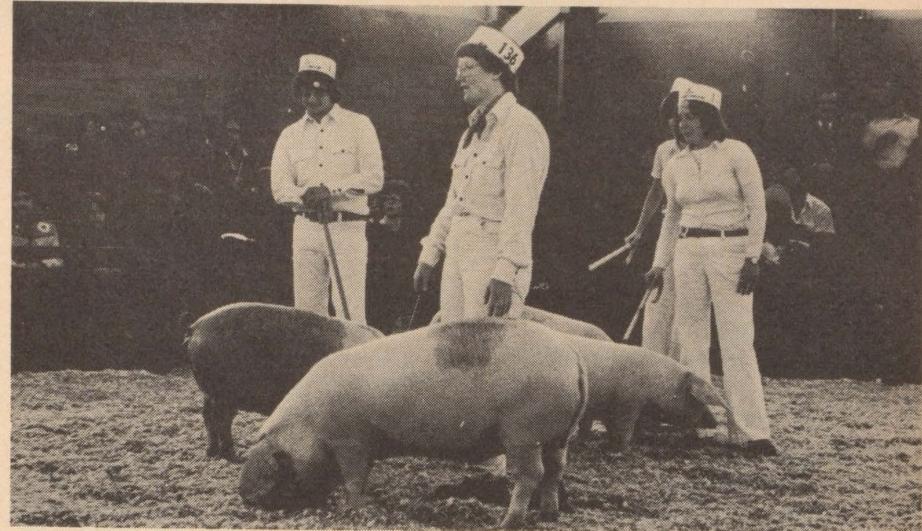
Once these preliminaries are out of the way, the real work of training can begin. Showing swine involves teaching them to respond to commands issued by tapping them with a cane. The commands normally used include: turn right, turn left, halt, and stop fighting. The strength of the tap depends on the pig. Some have naturally sweet dispositions and will respond to light taps out of sheer love for their exhibitors. Others, like Oliver, have character make-ups that tend towards the criminal.

These need more forceful encouragement.

The cane has other uses, notably as an aid to stopping fights. Pigs are not the most trusting of animals, especially as far as each other is concerned. A pig's idea of a formal introduction in the show ring is something like this: the two animals involved will eye each other from underneath their ears for a few moments, until one makes a particularly offensive grunt. This will cause the other to run towards it, full-tilt, and the two will see who can do the most damage to the other's ears in the shortest time. Meanwhile, the two showmen will be trying to pry the pigs apart with their canes. The problem is that most judges take a dim view of such antics, and this is why practice before the Show is so important. The more often you take your pig out to practice, the less disposed it is to violence the day of the show. The effects of all this practice on the showman's temper is unimportant, as far as the competition is concerned.

These were the activities that occupied the days before the Show. Similar things were going on in the other barns, too. Those people showing dairy animals were learning the intricacies of that art, and those showing sheep were getting calluses on their fingers from brush and shears. There was also the six foot tall Maritimer who was wondering how the 4½ foot tall Black Angus could be kicking parts of his body that were five feet off the ground.

The Show itself this year was a two-day event, with championships being held the second day. The judges: Mr. Bob Ness of Howick, Mr. Conrad Bernier of the Quebec Ministry of Agriculture and Mr. Jim Houston of the Macdonald College Farm all commented favourably on the affair after it was over. Mr. Ness felt that the students had shown with considerable enthusiasm and was impressed with the way staff



Championship Swine Showmanship Class — 1978 Livestock Show.

members had worked right along with the students. Mr. Houston said that the student organizing committee had done an exceptionally good job this year, considering that the number of exhibitors had doubled over previous years.

The students were equally enthusiastic. Many, especially novice showmen, singled out the farm staff for special thanks for helping them prepare for the Show. Professor Hartsock helped get the whole thing off the ground, as well as being responsible for the increase in the number of swine showmen.

Academic staff contributed to the success of the Show in at least one other way: by being responsible for a good laugh from the audience on the second day of the Show. Organizers included a hand-milking contest for staff members, and about 30 people participated. They worked in two-man teams, with each contestant having to fill a soft drink bottle and "chug" the contents while their partner held the cow being milked. I'm afraid that I cannot come up with the winners of this competition. At least three teams claimed championship; each had elaborate reasons why the other two should be disqualified.

Kidding aside, the Livestock Show this year was an unqualified success. Events ran smoothly and according to schedule. Animals shown were well-prepared: clean,

well-groomed, and well-trained. Experienced showmen had the chance to "show off" some of their skills, and novice showmen were able to get what was often their first experience in working closely with a large animal. In fact, several novices commented on this. One said "It's one thing to look at a string of cows tied up in the barn, but it's a lot better to get out and work with one every day for a month — you learn a lot more."

For those who are curious about how Oliver and I fared: Well, we had our differences. While he was only too happy to parade around the swine barn, he had very little use for the show ring. What made the situation worse was the fact that Oliver had little of the silent martyr in him. His protests were loud, lengthy, and generally upsetting. The climax to the event occurred when Oliver interpreted a command to "Stop" as a signal to run to the other end of the ring, knocking over whoever and whatever was in his way. He then backed himself into a corner, refusing to come out until the judges had given up and moved on to the next contestants. Oliver, thus missing his chance for fame, contented himself thereafter with biting the ears of any pig foolish enough to come close to him. I contented myself with visions of Oliver on the bacon shelf of the local grocery.

Should You Incorporate Your Farm Business?

by Marcel Couture
Diploma in Agriculture Program

If your yearly Net Farm Income is significant, the Provincial and Federal governments are, without a doubt, very important partners in your income-earning activities, probably to the tune of over one half of your marginal income.

Most of us do not particularly like to pay income taxes, but we do realize that we all have to share and contribute to the welfare of our community and country, and after all, our taxes are used to provide programs such as Medicare, the construction of roads and so on.

At the same time, most of us will start to have nightmares when the two levels of government's total portion of our income becomes over one-half of our income.

Do not think for a minute that you need to be a millionaire for this to occur. If you were a Quebec resident in 1977, you have reached that astonishing level and higher if your TAXABLE INCOME was over \$20,000. For example, with a TAXABLE INCOME of \$24,000, a Quebec resident had a 56 per cent marginal tax rate in 1977, as shown in the following tables.

1977 Rates of Federal Income Tax

Taxable Income	Tax	Taxable Income	Tax
\$ 710 or less	\$ 6%	\$12,771	\$ 2,441 + 25% on next \$ 2,838
710	43 + 16% on next \$ 709	15,609	3,150 + 28% on next \$ 4,257
1,419	156 + 17% on next 1,419	19,886	4,342 + 32% on next \$14,190
2,838	397 + 18% on next 1,419	34,056	8,883 + 36% on next 21,285
4,257	653 + 19% on next 2,838	55,341	16,546 + 39% on next 29,799
7,095	1,192 + 21% on next 2,838	85,140	28,167 + 43% on remainder
9,933	1,788 + 23% on next 2,838		

Source: Tax Guide 1977

The marginal tax rate indicates how much additional income tax would be paid if your income was to rise. Using the Tables above, we can determine that if a farmer's TAXABLE INCOME was to rise from \$24,000 to \$25,000, the additional income tax would be:

- (a) Federal: 32% of the raise, therefore $32\% \times \$1,000 = \320
- (b) Provincial: 24% of the raise, therefore $24\% \times \$1,000 = \240
TOTAL additional income tax on the raise = \$560

This would leave \$460 for the farmer.

The individual farmer is obviously restricted in his efforts to reduce his tax burden, but he is entitled to seek every legal advice he can in order to learn how to decrease his level of payable taxes, if he can. The tax department will even help him by answering any questions on the interpretation of the Tax Act.

One of the many opportunities offered to the farmer in his search for a decrease in his tax burden is the incorporation of his farm business. Of course, before he does incorporate, the farmer will want to consider many variables, such as the size and nature of his business. A very profitable farming business may be a prime candidate for incorporation.

In this article, we will look at some of the advantages and disadvantages of incorporating a farm business. Some of the technical problems involved will also be mentioned.

The Farm Corporation: Its Definition

A corporation or company, as it is commonly called, has been defined as an artificial person or separate entity. It has an existence which is separate from the shareholders or members who compose it. The properties and debts (assets and liabilities) are its own and not the shareholders. Instead of owning individual assets, the shareholders have an interest which is determined by the number of shares they hold in the Equity (Net Worth) of the business.

Once a farmer transfers his properties to a corporation (land,

Provincial Tax Rates (1977 — Quebec)

Taxable Income		
\$2,000 or less		
2,000	0%	\$ 7,000
9,000	0 + 16% on next	2,000
11,000	1,120 + 18% on next	3,000
14,000	1,480 + 20% on next	10,000
24,000	2,080 + 22% on next	15,000
39,000	4,280 + 24% on next	
60,000	7,880 + 26% on next	21,000
	13,340 + 28% on remainder	

Source: T4 Guide 1977

buildings, livestock, supplies, etc.), the corporation becomes the holder of the property titles. The shareholders elect themselves as directors, and as such, they may also hire themselves as officers and/or employees of the company. As such, they can operate it and manage it as they wish.

Most farm companies are privately limited companies. This means that they meet the following conditions:

- i) They have less than 50 shareholders.
- ii) The public is not invited to buy shares.
- iii) The financial statements are private documents.
- iv) The right to transfer shares is restricted in some manner.

The minimum number of shareholders allowed in private corporations is set by most provincial Acts as three (3). This is so in Quebec unless you were to acquire a Federal Charter. (If your farm business is located in the province of Quebec, it will be to your advantage to incorporate under a provincial charter. Your notary, lawyer, and/or farm management specialist will be able to advise you further, given your specific conditions.)

Cost of Incorporation

The average fee charged by a province for the incorporation of a privately owned company is \$150. When the legal fees and the accounting fees are added, the total cost of incorporating the average limited company should be in the range of \$1,500, but it could be higher depending on the size and complexity.

Now that we have become a little more familiar with the definition of a Corporation, we are prepared to study and analyse some of the advantages of incorporation.

Advantages of Incorporation

1) Transferability of ownership:

When a farm is incorporated, the ownership of land, buildings, machinery, livestock, and other assets is converted into preferred and/or common shares. If, for example, the father wants to sell his equity in the company to members of his family, they can buy his shares. Anyone can be a shareholder, including the wife, children and grandchildren. (We will see later that there are some tax implications if some shares are sold out of the family, i.e., taxable capital gain to the seller.) It should also be noted that the shares can be divided in any way wanted keeping in mind that to keep control of the corporation, any individual needs to own over 50 per cent of the outstanding shares. This is obviously much more convenient than buying part of the land, livestock, and so on.

If the father or some of the shareholders should die, the business is not required to dissolve. The shares can be given to shareholders' heirs through a will or sold to the other shareholders. This action will facilitate the continuity of the business.

2) Limited Liability:

For a shareholder, one advantage of incorporation is limited liability. If a limited company fails, the creditors cannot seize the personal (or real property) of the share-

holders. The shareholder's liability is limited to the amount he has paid or agreed to subscribe for the purchase of his shares in the company. However, in many cases, when a family farm is incorporated, most or all of the assets are usually transferred into the company in order to ensure that the company is adequately capitalized. If all the assets, including the personal assets, are represented by shares in the company, they are placed at the full risk of the business.

3) Credit Availability:

A corporation is by definition a more stable business than a sole proprietorship. This stability may favourably influence the lenders. They will be more inclined to extend liberal credit to a corporation because of the business-like structure and because of the added continuity of management. However, in many cases, the senior members may still have to sign the notes as individuals, separate from the corporation, especially until the corporation is well established.

4) Tax Savings:

i) Income Tax Rates: In 1977, the general taxation rate was 46 per cent for corporations. However, since most incorporated family farms qualify as Canadian Controlled Private Corporations, they are eligible to receive the small business taxation rate. This rate is a constant 25 per cent in most provinces and approximately 28 per cent in Quebec. This applies to the first \$150,000 of active business income per year. Over that amount, it will be taxed at the general rate of 46 per

cent. Also, after a company has accumulated corporate incomes of \$750,000 it is no longer considered as a small business, and it will be taxed at the rate of 46 per cent.

ii) Rollovers: The farmer is entitled to a tax-free rollover with respect to capital assets transferred to the corporation to the extent that the taxpayer receives shares of the corporation in exchange. This means that the tax on capital gains can be deferred until these shares are sold outside of the family.

iii) Splitting of Income: Incorporation permits both the husband and wife to work for the business so that both salaries are deductible expenses in calculating the corporation's taxable income. This means that the employees of the corporation (the husband, wife, children, or others) will be able to contribute to and receive benefits from the Quebec Pension Plan, a registered retirement saving plan (RRSP), or other similar programs available to wage earners. However, the amount paid to the employees must be realistic and related to the actual services they provide. The salaries are then taxed as income in the hands of the individual. If salaries are paid to wives and sons and a satisfactory bonus plan implemented, most of the farm company's profits can be effectively exhausted.

Due to the fact that we have in Canada a progressive tax rate (see Tables above), this splitting of income translates into a lower total tax payable than if all of the salary had been paid to only one person because both salaries are taxed at a lower rate.

iv) Retention of Profits: Apart from paying the family members' salary, any taxable income which may remain in the company after salaries are extracted will be taxed the constant rate of approximately 28 per cent in 1977 (up to

\$750,000). Given the fact that we do have a marginal tax rate, this can translate into quite a saving even if the income is not split among the family members.

v) No Penalty for the Transfer of an Incorporated Farm within the Family: As of the tabling of the Federal Budget by the Minister of Finance Jean Chrétien, on April 10, 1978, an incorporated family farm can be transferred to a wife, son, or daughter without payment of capital gains. The rule **does not** free them totally from this tax. They will have to pay it if and when they sell their shares outside of the family.

Before the tabling of the budget on April 10, 1978, this tax deferral was not possible and this was seen as a major drawback of incorporation. Now that this drawback has been resolved, incorporation will certainly gain some ground as a viable alternative to other types of farm business arrangements.

Disadvantages of Incorporation

i) The high cost of incorporation: There is a good deal of necessary legal work involved in incorporating a farm business. For the average farm, this can easily mean over \$1,500.

ii) The structure is more complex: A company is more expensive to operate and to dissolve than any other farm business organization. A lot of red tape is necessary. The Companies' Act requires that officers be elected, that a certain number of meetings be held annually, that certain reports be filed annually, that records be kept, etc.

iii) The High Cost of Dissolution: A company is much more difficult to dissolve (and expensive) than other types of farm business arrangements. A tremendous amount of red tape will also be involved at dissolution.

iv) Capital Gains on Depreciable Assets Transferred to the Corporations: When depreciable assets owned prior to 1972 and depreciated using the straight line method are transferred to a company, they must be depreciated using the diminishing balance method (Part XI of the Tax Act). Assets on the Part XI method of calculating depreciation which are sold to a company for more than book value will result in Recaptured Capital Cost Allowance to the individual. This Recaptured Capital Cost Allowance will have to be added to the farmer's income for that year. Due to the progressive tax rate, this could mean a large sum of additional income tax for that year.

v) Residence: If the principal residence (farm plus one acre of land) is transferred to the company, any capital gain will be taxable when it is ultimately sold. If the title of the house is retained by the farmer, any capital gain on the principal residence is exempt from taxation. The farmer could rent part of his residence for a fee to the corporation if the corporation requires office space, etc. There are some other rules that concern this particular transaction with which we cannot deal in detail here. As a general rule of thumb, it would appear desirable, if possible, to leave the personal residence(s) out of a farm corporation both from the standpoint of taxable capital gains and of taxable benefits accruing to the occupants. In addition, if the company were to fail, the limited liability aspect may ensure that the operator would not also lose his house(s).

vi) A pre 1972 basic herd cannot be rolled into a company. A basic herd transferred to a company will be regarded as an expense by the company.

vii) Inventory: The transfer of livestock and crop inventories into a company may cause

problems if handled improperly when a company is formed.

Steps to take in Incorporating the Family Farm

Many steps should be taken before going ahead with such a major decision. Some of the steps are listed below:

1) Visit people that have already incorporated their family farm. Discuss with them the difficulties and questions they may have encountered.

2) Read the Companies' Act even if it is difficult to understand. You will not need to understand it all but it will outline for you the requirements of both the Memorandum of Association and the Articles of Association that govern private companies. The former being the basic constitution of the corporation and the latter being the rules and will deal with its internal administration.

3) Find an accountant, lawyer, a notary and a farm management specialist who are all well-versed on the subject of farm incorporation and farm estate planning. Get an estimate of their fees. Keep in mind that you are incorporating mainly because of the potential tax savings in the years ahead. Get professional advice and be prepared to pay. Free advice received from pseudo experts will usually cost you more in the long run than professional advice.

4) Get all of your advisors together for a few hours to discuss with you the various alternatives and possibilities. Your lawyer should understand your financial situation if he is to do a good job. To know about your financial situation, he should get the opportunity to discuss incorporation with your accountant. We live in a world of specialists. No one alone knows all the angles. Team work is **absolutely necessary**.

Should the Farm Business be Incorporated?

There is no clear answer to this question. Each farming operation is unique and must be considered strictly on an individual basis. For the majority of existing farms, incorporation would not be beneficial and many disadvantages would apply.

If you are wondering whether incorporation should be considered in your particular situation you should consider the following points:

1) What is your average yearly TAXABLE INCOME? If it is currently in the \$15,000 — \$20,000 range or higher and much of this money is not needed for personal living, there is probably an immediate tax advantage to being incorporated.

2) Do you intend to increase the size of your operation? If the answer to this question is yes, you may want to consider incorporation. For example, if your son has recently graduated from an agricultural college and he wants to join you on the farm, this may mean that the farm will be increased in size and will have to generate more income to support a new family. This is a good time to consider incorporation — to entice the son to come back to the farm. Many farmers complain that their children do not want to help on the farm. In many cases, farmers should assume most of the blame for this sad state of affairs.

If the farmer is not willing to discuss business with his children, and if he is not willing to let go some of the equity and if he is not willing to hand out responsibilities and some of the power to take decisions to the son, there is no way the son will stay or should stay on the farm when he

can go and work in the city for \$12,000 per year, with company car, five days a week and so on.

3) Is your wife working in a productive capacity in the business? If the answer is yes, you will be able to split income by incorporating. It may be a major advantage.

4) Does the business have a large net worth (equity)? If your equity is \$150,000 — \$200,000 or more, incorporation may be for you.

5) Is the farmer willing to complicate his affairs to minimize taxes? If you are willing to submit yourself to the legal requirements of the Companies' Act (proper farm records, meetings, legal complexity, etc.) and the tax advantage would over-compensate for the associated costs, incorporation may be for you.

Answering these questions should help you decide whether to pursue the matter further or to think in terms of other business arrangements. Be prepared to spend time and money to study the alternatives. Do not drop the issue simply because it appears to be technically complex. Be prepared to plan today for the future.

REFERENCES

1. Farm Business Management, I. 6., Advice on Estate Planning and Business Arrangements, Advice on use of Corporations, a Project of the Canada Committee on Farm Management Services.
2. Farm Business Incorporation, A.D.A.
3. Farm Information Services, United Grain Growers, Agricultural Economics Section.
4. Farm Business Management by Marcel J. Couture, Macdonald College.

In Defense of the Environment

by Professor J. Gerols
Department of
Renewable Resources

In recent years a growing public awareness of the gradual deterioration of the environment has resulted in a number of confrontations between individuals and private or public companies bent on invading private property and often causing considerable damage in the name of "service" to the community.

Whether you oppose construction of a new airport like Pickering, a dam on the Jacques Cartier River or a Hydro line across Vaudreuil-Soulanges, you will have a tough battle on your hands if you end up facing a Government; especially when the outcome of the project involves millions of dollars! That kind of confrontation requires incredible stamina on the part of the private citizens who refuse to be bullied out of their land or see their woodlot razed to make place for concrete or steel towers. In such cases, the fight is long drawn and costly; victory is, at best, partial and often temporary. Yet, those cases have proved that you can fight town hall — and even Parliament Hill — when their decisions threaten your environment, and the laws of the land are gradually making it easier for you to do so.

Even if the change that threatens your community appears to be on a smaller scale, you and your neighbours may wish to take a strong stand against a disturbance that might be detrimental to your environment. Whether you have to deal with an individual, such as a quarry owner (who might pollute your air with clouds of fine dust), a plant or industry (that might pour out waste into your river) or a Government body (who might decide to expropriate the vacant lot next door for a garbage dump), you can fight these nuisances and protect your interests.

As an individual, unless you have unlimited financial resources at your disposal, you will find it practically impossible to start legal proceedings against the offender. You can, however, call upon several government bodies to help you:

If your health is threatened: get in touch with the Federal Department of Health, by calling the Health Protection Branch, 1001 St. Laurent in Longueuil (tel. 283-5488).

If the damages are restricted to the environment, contact the Provincial Environment Service, and particularly the Environment Protection Service, in the Municipal Affairs Department, at 255 Crémazie East in Montreal (tel. 873-4154).

If the offender is a Government agency, you may have recourse to the Provincial Ombudsman by calling his office at 1255 Phillips Square in Montreal, (tel. 873-2021).

In all cases, you will get more attention from the above agencies if you do not call upon them as an individual but as the spokesman for **an association**. If you are not the only one affected by the proposed change in the community and you feel that others have reasons to object also, your best policy is to assemble as many of your neighbours as you can and organize the first task: publicizing the problem in the whole region, either by telephone calls or by leaflets dropped into letter boxes, urging concerned people to attend an information assembly, either in a private home or in a church hall. If you drop leaflets, make sure they are received not later than two days before the date set for the general meeting.

In the meantime, try and gather as much information as you can, from official sources, on the project in question. This is not such a formidable task, if everyone agrees to make a few phone calls and shows some perseverance in the process of inquiry.

On the day of the assembly, you can then brief those present on the nature of the projected change to their community and stress the danger it may present to their environment. The assembly then proceeds to choose a name for the association and to elect the officers (president, vice-president, treasurer, secretary, one or several directors). The newly elected president then arranges with a lawyer (there might be one among those present, or among their relatives) to have the statutes drawn and the association **properly registered** (approximate cost is \$50, which can be contributed by the members).

The main advantage of forming a non-profit association, apart from the fact that it carries a lot more weight with government agencies, is that it entitles you to apply for **Legal Aid**, which makes it possible for the Association to undertake legal proceedings **without any expense to members**. To obtain legal assistance, you have to contact the Community Legal Centre of Montreal (Government of Quebec), 800 de Maisonneuve (tel. 842-2233) to find out where your local branch is, or you can look it up in the phone book under "Community Legal Centre" (Government of Quebec). You then make an appointment with your local branch and hand them a file that includes a brief outline of your reasons for objecting to the project, the statutes of your association, and a financial statement of the association. The Legal Aid office will, if your request is granted, remunerate the lawyer of your choice and defray all legal costs.

Even if you do not intend to take the case to the Court of Law, forming an association will enable you to get more publicity through the newspapers, radio, and even television. You might start by sending a detailed description of the problem (the one you sub-

(Continued on page 13)

MCLENNAN TRAVELLING LIBRARIES TRANSFERRED

Under an agreement recently concluded with the Quebec Ministry of Cultural Affairs, McGill University is to transfer to the government the operation of the McLennan Travelling Libraries. This natural evolution of the Quebec public library system is expected to provide new impetus to a valued community service which today is no longer appropriate to university activities and for which McGill has insufficient funds.

Within the provincial government's long-range plan, a regional library has been established for the Eastern Townships — la Bibliothèque Centrale des Prêts de l'Estrie (BCP) — to which, after very serious consideration, it has been decided to transfer the operation of the McLennan Travelling Libraries. This new regional library will have "The McLennan Collection" as the nucleus of its English language material. The transfer will take place slowly over the summer months and there should be no change in the pattern of service to users.

McGill's travelling libraries began operations in 1901 with funds from the family of the industrialist Hugh McLennan, particularly to provide for isolated anglophone communities in Quebec, which at the turn of the century had no access to other cultural facilities. In practice the McLennan Travelling Libraries operated from the Yukon to Labrador, well beyond the boundaries of Quebec but, with the expansion of public library facilities in other provinces, the service has limited itself to Quebec since World War II. Now that this province, too, is going ahead with a plan to assure adequate library services to its own population, the McGill enterprise has served its purpose.

The contract provides that BCP will take over not only the more

than 65,000 volumes and the shelving for them but the famous "Bookmobile" as well and that it will continue all existing services throughout the province wherever there is no regional lending library. Local needs will in due course be met by such lending libraries.

The BCP will develop the collection according to its general internal standards and in particular the important collection of books for children. Indeed McGill is particularly concerned that the McLennan services of leisure reading for children be maintained. Hitherto the McGill bookmobile has substituted for rural school libraries in areas where adequate leisure reading facilities for children had not been developed and additional support will eventually be needed to assure suitable facilities in such schools.

McGill's donation of this collection to BCP is a sincere contribution on the University's part to the further development of public library service within the province. The collection and its services were originally made possible by a series of gifts from the McLennan family, which will continue to be remembered not only through the McLennan Collection but through the University's major library structure the McLennan Library building.

(Continued from page 12)

mitted to the Legal Aid office, for instance) to the principal daily newspapers. Media coverage is not always easy to get, but on the whole newsmen and journalists are very cooperative and eager to receive interesting news items. All major newspapers have a specialist in environmental matters; you can easily find out who he is by asking the editor in chief or his secretary and then deal with this person directly.

People have become increasingly

Other generous gifts from friends of the McLennan Travelling Libraries as well as a series of financial contributions from the provincial government since the passing of the Quebec Public Libraries Act in 1960 have been augmented from the University's own resources of funds and facilities.

The government's intentions have been made clear in a statement which they have just published and which includes the following:

"C'est la création récente de la Bibliothèque Centrale des Prêts de l'Estrie et la collaboration de l'Université McGill qui ont rendu possible cet élargissement des services offerts à la clientèle anglophone de la région."

"Le Ministère des affaires culturelles procède, depuis dix-huit ans, à l'organisation d'un réseau de bibliothèques publiques pour desservir l'ensemble de la population du Québec. L'intégration de McLennan Travelling Libraries à ce réseau devrait permettre d'améliorer et d'élargir dans les secteurs peu densément peuplés, le service de bibliothèque publique à la population anglophone."

(This Press Release was supplied by the Information Office, McGill University.)

vocal in deplored the lack of concern by industries and public utilities for our diminishing resources, such as agricultural land, and some Provincial governments have responded to public pressure by promulgating more stringent laws to protect the environment. In Quebec the Environment Protection Act is a good example of this kind of legislation, but it will not serve much purpose if the public does not avail itself of the rights it now has to defend its environment.

The Family Farm



Published in the interests of the farmers of the province by the Quebec Department of Agriculture.



REVISED AGRICULTURAL PROGRAM — LAND DRAINAGE AND IMPROVEMENT, FARM PONDS, ARTIFICIAL LAKES, AND ARTESIAN WELLS

Changes in Agricultural Hydraulics in 1978

Convinced of the importance of soil improvement, the Quebec Department of Agriculture is increasing its involvement in this area in 1978.

Quebec's agricultural area is limited to some 5,000,000 acres, only 3,500,000 of which are considered to be good farmland. This productive soil is found mainly in the Plain of Montreal region and in the Saint Lawrence Lowlands. Considering such a situation, it would be difficult to carry out intensive farming in this area or elsewhere without resorting to drainage.

For this reason, the Department, in 1978, has once again introduced major changes to its program on "Land Drainage and Improvement, Farm Ponds, Artificial Lakes and Artesian Wells" in order to provide farmers with greater financial and technical assistance.

Last year, subdrainage and mechanized works, in particular, were affected by the changes to the program. In 1978, the entire administration of the Agricultural Hydraulics Service was thoroughly reviewed. As a result, it is the 84 local farm information offices (formerly called district offices) which from now on will be responsible for the various agricultural hydraulics projects.

Role of the Agricultural Information Office

In an address to the "Association des entrepreneurs en drainage souterrain", Jean Garon, Minister of Agriculture, compared the importance of the reorganization of the Agricultural Hydraulics Service to that of the setting up of the Regional Offices and Laboratories.

From now on, the responsibility of informing and advising farmers with respect to the various projects of the Agricultural Hydraulics Service will fall on the Agricultural Information Offices. It will also be up to these offices to approve, direct, and supervise any work carried out by the Department, a private company or the farmer himself. In addition, the local offices will provide technical assistance to those municipalities preparing a project for the construction, improvement, and maintenance of municipal watercourses.

In summary then, for all projects which come under the Agricultural Hydraulics Service, farmers will hence forth have to apply just to their local office of the Department. Moreover, there are other important changes regarding financial and technical assistance for agricultural hydraulics projects, particularly those for subdrainage, mechanized works and the construction, improvement, and maintenance of municipal watercourses.

Subdrainage

Last year, the Department's firm efforts in the area of subdrainage resulted in the laying of almost 73,000,000 feet of drains, which means that 92,105 additional acres of land are now adequately drained. Such results are encouraging and enable us to look forward to the installation of at least another 90,000,000 feet of drains in the coming year.

In 1978-79, a farmer wishing to carry out drainage work will receive a Department subsidy of \$0.70 per linear metre of tile drain (\$0.21½ a linear foot) which he will install or have installed, as well as for the carrying out of his drainage plan. In addition, in isolated regions, the Department makes a bucket ditching machine available to the farmer and lays the drains entirely without charge to him.

Mechanized Works

As regards mechanized works, two important changes have been introduced this year. The first concerns the provincial subsidy for mechanized works, which will be paid directly to the farmer rather than to the contractor carrying out the work, as was formerly the case. This subsidy is for 50 per cent of the real cost of the work which must be carried out by a contractor whose industrial equipment has been registered at one of the 12 regional offices of the Department.

The Agricultural Hydraulics Service undertakes to reimburse the amount owing to the farmer within 30 days of the final inspection of work by the local office. In this way, the Department hopes to radically shorten the delay for

payment of subsidies, which in the past often meant four to six months.

Finally, it should be mentioned that the number of hours subsidized by the Quebec Department of Agriculture will be determined solely by the area of the farm, on the basis of three-quarter hour per acre of land under cultivation. The 60-hour limit set last year has been abolished.

Construction, Improvement and Maintenance of Municipal Watercourses

Measures have been taken to encourage municipalities to assume once more the responsibility for the construction, improvement, and maintenance of their watercourses. For example, as regards small watercourses, the Department pays municipalities a subsidy equal to 50 per cent of the cost of preparation of a watercourse improvement project. If estimates for the project are submitted to the Department before December 31, 1978, the provincial government will agree to subsidize in 1979, 80 per cent of the lowest tender (submitted and received by the municipality) for work related to the construction, improvement and maintenance of a municipal watercourse, which also includes the replacement of farm bridges and culverts.

Therefore, in 1978-79 municipalities may choose to have the Department assume full responsibility for the construction of watercourses or to become directly involved in the carrying out of several of these projects.

Of course, the Agricultural Hydraulics Service has other programs which, among other things, concern the construction of farm ponds and artificial lakes. All farmers wishing information on these programs are invited to contact their local agricultural information office.

With these substantial changes to the entire set-up of the Agricultural Hydraulics Service, the Department hopes to work more closely with the farming population. It is hoped that this will improve operations and convince the farmer that it pays to make wise use of farmland, this valuable non-renewable resource.

SWINE PRODUCERS, KEEP UP TO DATE

In 1977, swine production in Quebec experienced considerable growth. In fact, the province placed first with respect to the total number of pigs slaughtered, and its pork has gained an excellent reputation on international markets.

In order to maintain this reputation and remain competitive, it is important that Quebec swine producers be very demanding with regard to the quality of replacement pigs purchased. The days when gilts were chosen from among females which were originally intended for slaughter have come to an end. Today, the serious swine breeder may refer to basic, well-planned crossbreeding programs which enable him to increase his productivity. The following information will doubtless interest breeders who wish to find out where they may obtain the boars and gilts that they need.

First of all, it is important to note that in Quebec there are two selection programs whose main purpose is to improve the genetic quality of breeding swine. Specifically, these programs entail R.O.P. testing on the farm and at the station.

A) R.O.P. Testing on the Farm

For all breeders enrolled, this program makes it possible to appraise their purebred males and females for two economic profitability traits, namely, back-fat thickness and daily gain.

R.O.P. testing on the farm makes it possible to compare each pig to the herd average and to assign to it a gain-probe index, also called a contemporary index. An index greater than 100 means that the animal has a genetic potential that exceeds the average for the other tested animals in the herd. An index lower than 100 denotes the contrary.

This new method of appraising purebred stock has been in force in Quebec since January 1, 1977. It eliminates environmental influences and helps to determine as accurately as possible the genetic potential of an animal raised on the farm.

All producers of slaughter hogs should make every effort to purchase only animals with an index of over 100. They should make it a point to check the daily gain and back-fat readings of the animals they intend to buy, and make their choice on the basis of what they mainly wish to improve in their swine herd.

Testing on the farm allows for the appraisal of hybrid females begotten by purebred parents, but of two different breeds. Such females are termed "qualified" and must meet certain standards with respect to daily gain and back fat.

In the case of purebred males and females, as in the case of hybrid females, an official certificate is proof to the breeder that the purchased animals have in fact been appraised by Department officials. It should be noted that the Quebec Department of Agriculture also carries out a type-conformation inspection of the pigs and that those which qualify possess all the traits characteristic of their breed.

Moreover, they must not indicate any genetic abnormality. As regards hybrid females, they have a minimum of 12 (six pairs) of normal teats.

The Department also publishes a bi-monthly catalogue, which provides the breeder interested in buying hogs such useful information as the name and address of breeders enrolled in R.O.P., the number of animals tested per litter, and individual performance.

To receive this catalogue on a regular basis, you must apply to the Livestock Productions Service (Swine Division) 200-A, chemin Ste-Foy (11th floor) Quebec, G1R 4X6, telephone (418) 643-7617.

B) R.O.P. Testing at the Station

Breeders whose purebred animals are on performance testing on the farm may also have the males in their herd tested at the Lennoxville research station (R.O.P. section) for daily gain, back-fat thickness and feed conversion. An index which combines these three factors also makes it possible to

qualify the genetic potential of each subject.

Finally, it should be noted that each month all pigs which have maintained an index of over 100 and have passed the type-conformation inspection are sold at the Lennoxville station. To receive the catalogue and further information on sales and their dates, write to the Livestock Division, 1435 rue St-Alexandre, Suite 1200 Montreal, P.Q. H3A 2G2.

The following table clearly shows that hog prices at the Lennoxville

sales in 1977-78 compare favourably with farm prices set by swine producers.

One cannot overlook the increased herd value which results from the introduction of a superior boar. An increase of one index point on all pigs sent to slaughter in a year justifies the purchase of a good herd boar, and is \$400-\$600 on all pigs sent to slaughter in a well spent.

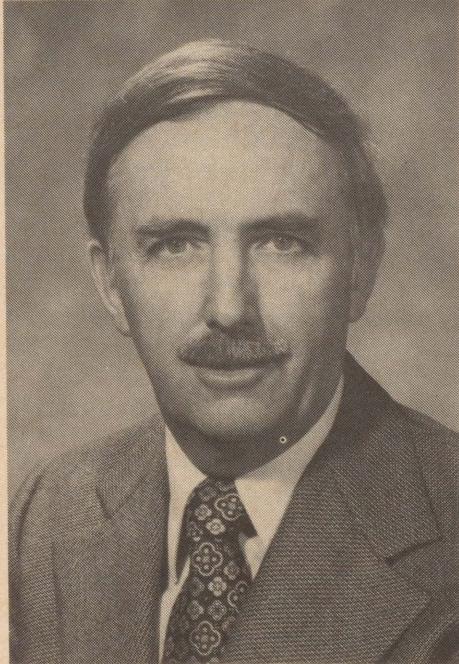
Table 1

Date of Sale	Number of Boars Sold	Average Prices
December 1976	12	\$588
April, 1977	18	670
June, 1977	11	517
July, 1977	9	460
August, 1977	18	750
September, 1977	16	485
November, 1977	16	366
January, 1978	11	459
March, 1978	12	277

CANADA PACKERS LIMITED

Mr. R. D. Selvage, General Manager of the Shur-Gain Division, Canada Packers Limited, announced recently the appointment of Mr. Raymond Authier as Regional Manager for the Quebec and Eastern Ontario Shur-Gain operations.

Mr. Authier joined the Company in 1945 and has gained broad experience in all areas of the feed industry. Following experience in clerical and sales territory work, he was appointed Assistant Sales Manager in 1957, Sales Manager in 1962, and following a most successful period directing the sales force, was appointed Assistant Manager in 1976.



Mr. Raymond Authier

Mr. Authier has held several positions with the Order of Agrologists of Quebec and is presently President of the Quebec Division of the Canadian Feed Industry Association.

Mr. Selvage also paid tribute to Mr. D. M. Smythe who had been Manager of Shur-Gain in Quebec for the past 13 years and who has retired having completed 42 years of service with the Company.

This Month with the

QWI

Provincial Office

It is with regret that the Executive have accepted the resignation of Mrs. James Gamble from the position of Secretary. On behalf of the QWI, the Executive would like to thank Betty for her endeavours over the past two years. They would also like to introduce and welcome the new Provincial Secretary Mrs. Bruce Washer. Sheila, her husband and four children live close to the College and she plans to be in the office several times a week. With the move to our new quarters in the Macdonald-Stewart Building, telephone service will be disrupted until July 1st. After that time we would ask members, wishing to phone the office, to do so on Tuesdays. The College phone number will be 457/2000.

Mrs. Washer is a member of the **West Island** branch and though a relative newcomer to Women's Institute, she has worked for various voluntary organizations, including the Girl Guides.

Presenting with Pride Two Life Members

As **Ormstown** Women's Institute prepares to celebrate its 40th Anniversary, we are proud to write about two of our members, Mrs. Luina Bruce and Mrs. Christena McNeil, Life Members of QWI.

President Willa Hooker, Secretary Mary McGerrigle, with Mrs. Bruce's sister Mrs. Ada Gillard, visited these two ladies to present them with mohair throws — gift of the QWI from the Abbie Pritchard Bequest Fund. The accompanying letter from Mrs. Ina Kilgour, Provincial President,



Mrs. Christena McNeil



Mrs. Luina Bruce

expressed the wish that they would enjoy using them.

Mrs. Bruce lives at Centre d'Acceuil and Mrs. McNeil at the Ovans Convalescent Home. They are enjoying their retirement years and welcomed their visitors happily. They are still members of Ormstown Branch, although weather conditions, distance, and health make regular attendance at meetings rather difficult.

Mrs. Bruce and Mrs. McNeil told us that they had been WI members for years. Mrs. McNeil joined the group nearly 40 years ago — she is a Charter Member of Ormstown — and has been a member all these years. She looks back with pleasure to the "good old days" when the newly-formed Ormstown organization was involved in many worth-while projects. These were the early years of the Second World War

and members had to contend with rationing of sugar, meat, and coffee and in addition help friends overseas as well as the needy in their own neighbourhood. Mrs. McNeil held offices of President, Secretary, and Treasurer. She spoke of the days of canning for the local high school cafeteria and all that was involved in that project. Mrs. McNeil is 90 years of age.

Mrs. Luina Bruce has been a QWI member for 55 of her 98 years of life. She is a Charter Member and the first President of the Aubrey-Riverfield branch when she married and went to live in that part of the County. Later she moved to Franklin and helped to organize that group. On coming to Ormstown in later life, Mrs. Bruce became a member here. Mrs. Bruce has been very active, having held offices from local President to County President. It was while Lady Tweedsmuir lived in Canada that Mrs. Bruce was County President and she remembers vividly how keenly interested the First Lady was in the various projects carried out by Quebec members.

As we chatted with these two senior ladies we felt that they very truly had lived the words of the Ode:

"Each shall seek the common weal
The good of all mankind."
and of the Collect, for they have indeed " Taken time for all things" and are today as yesterday "calm, serene, and gentle" — an example for all of us.

Dear WI Members:

It is time for another letter for the Journal, but other things seem to be getting in the way. A poet said, "I meant to do my work today, but... there are so many

distractions on these last fine days of April." On the way to the post office this morning a little tot said to me, "It's a pretty day." It was, and the outdoors was very inviting. There are a few new county publicity conveners — we welcome them and look forward to what they will contribute to our magazine. Nearly all branches mentioned our up-coming Annual Convention. From many standpoints it is a very important part of our organization.

Alma Jack writes: "The members of the Valcartier Women's Institute met recently with a newly elected president and a full slate of officers and conveners. Our new programs were hot off the press and everyone seemed ready for a challenging new year." Conveners from other branches echo Mrs. Jack's sentiments. This same branch reports that 300 cookbooks have been sold, the usual monies donated to help in the upkeep of the local cemeteries and cotton brought in for the Cancer Society. From **Matagami** we learn that the members, when answering the roll call, all agreed that we should have a woman prime minister some day. Mrs. Hervieux, Home Economics Convener, gave a handicraft display.

At the annual meeting of the **Restigouche** branch 15 members were present. There is one home member, namely Mrs. William Barnes. Sunshine baskets have been sent and a donation of money voted to help a handicapped child. This branch appreciates the publicity given them by the Campbellton Graphic. We are pleased to hear from **Grosse Isle**, Magdalen Islands. Mrs. Grace Rankin tells us that the proceeds from the quilt made last year were gratifying and the ladies are

working on another quilt. The branch sponsored the program Young Canada Works last summer, and have applied for a similar undertaking for the coming season.

Roll call at **Abbotsford** was to bring in a cookie recipe. Each member brought samples of their recipe and these were served as refreshments. Agriculture Convener Mrs. W. P. Watson gave a talk on planting a vegetable garden. This was followed by a quiz on the mixed up names of vegetables. The ladies from **Clarendon** are planning a trip to Niagara Falls in mid May and appointed their delegate Mrs. Christine Armour to the County Convention at Quyon. They decided to fill 15 handbags and to take \$75 from their funds to pay for them.

At the **Arundel** meeting much business was done but the outstanding features were: a donation to the graduating class of Arundel Elementary School and the Wi-sponsored library in the school was discussed, with a request for volunteers. Work was done on crib quilts for children through CanSave at **Frontier**. The members wish to thank Mr. Darrell Bates and Mr. and Mrs. Crawford for the music for the April 1st party in the Legion Hall at Brownsburg. The **Grenville** group had a demonstration on making yogurt in the home. They were shown a film, the machine was demonstrated, and they were given a taste of yogurt and cheese. Both were quite delicious. At the **Jerusalem-Bethany** meeting Mrs. Mildred Graham commented on the motto: No one is rich enough to be without a neighbour. She also read an interesting and enlighten-



Mrs. E. M. Goodfellow provides the much appreciated musical accompaniment for Brompton Road WI meetings. She is both a Charter and a Life Member of the branch which was formed on February 28, 1924

ing item concerning the use of microwave ovens and sun lamps. The article stressed the misuse and dangers of these conveniences. Five members offered to make the monthly visit to St. Philippe Manor. At **Brownsburg** an interesting account of her trip with her husband to the British Isles was given by Mrs. Marion Connelly. The talk was illustrated with excellent slides.

Five branches reported from Chateauguay-Huntingdon. The Agriculture Convener of **Aubrey-Riverfield** reported on three local farmers: Robert E. Ness became President of the Ayrshire Breeders' Association, Murray Templeton won a Master Breeder's Award and Allan McKell won three production plaques for his Ayrshire herd. **Franklin Centre** ladies made preparations to host the County Convention. An Easter bunny raffle was held for Pennies for Friendship. Mrs. William Brown of Elgin, daughter of an **Ormstown** WI member, showed slides of England and Scotland. Mr. Brian Weley showed slides of local scenes taken during the 1977 Centennial Apple Festival at the **Hemmingford** meeting. Also from

this branch we learn that a home nursing course has been started in the area as well as a St. John Ambulance Course, and a wheel chair has been donated to the WI by Mrs. D. Ryder in memory of her husband. **Howick** enjoyed a talk by Mr. Arthur Gosselin on prevention of blindness. Three members were asked to act as judges for the public speaking contest to be held in the elementary school.

Richmond Young Women donated a geriatric chair to the central infirmary at the Wales Home. They also catered for a banquet for the students of Richmond Regional School and the students from Newfoundland who were on an exchange program. Members ordered Adelaide Hoodless roses. **Shipton** and **Milby** made donations towards the new landrover for Lesotho; towards the Sherbrooke SPCA, which serves a large area and is in danger of closing because of lack of funds. Ten handbags were filled ready to be taken to the County meeting. Both **Richmond Young Women** and **Melbourne Ridge** honoured seven members with perfect attendance this past year. At **Spooner Pond**

a sale of used books is held at each meeting and the proceeds used to buy a book or books for Richmond Regional School.

The roll call for **Inverness** was name a tourist attraction in your County. Some of the answers were: Lysander Falls, Black Lake Mine, and the gorgeous coloured leaves in the fall. Plans were made to cater for a lunch for a busload of senior citizens. The Health Convener asked the members to save cotton or flannelette, cut in strips and rolled for bandages. These are to be sent to Liberia, empty pill boxes could also be used.

The ladies at **Cowansville** are making 10 handbags and a collection was taken to help fill them. **Fordyce** made plans to host the Missisquoi County Convention and told us they were sponsoring a child at Camp Garagona for one week.

Sawyerville were making plans for the up-coming musical evening. Mrs. Bentzen, a member of **Ascot**, gave an interesting talk on decoupage and showed samples

of her work at various stages of completion. **East Angus** and **East Clifton** have been working to complete their histories. Mrs. Victor Bell and Mrs. Ronald Bell of East Clifton made and donated a quilt to the second year nurses class at Alexander Galt Regional High School. The student nurses sold tickets on the quilt, and the money will help pay for training to be taken in Montreal later in the year.

More news has just come from Bonaventure County. The Publicity Convener of **New Richmond West** gave a brief history of the Mary Stewart Collect. One member volunteered to donate the sick and shut in gifts for the month of April and this same branch donated \$10 to CanSave. From **Grand Cascapedia** we read of their annual project: to raise money, tickets are sold each month on a handmade quilt to be raffled in July. The ladies from **Marcil** held their meeting at the Port Daniel Museum where all members were able to view the antiques. Plans were made to host the County Convention.

The Agriculture Convener of **Granby Hill** spoke on the Adelaide Hoodless rose and showed a glass jar method of sprouting seeds. The members decided to purchase a Hoodless rose and to renew their membership in the Douglas Hospital Auxiliary. Then for some fun six members modelled their Easter bonnets made from articles found in the kitchen, with Mrs. Reg. Robinson and Mrs. John Sandborn being the winners. At **Waterloo-Warden** the members made plans to entertain the annual County meeting. Each member gave 51 cents as they are starting their 51st year — the money to go to ways and means.

At **Belvidere** Miss Hazel McGee had charge of the meeting and invited Mrs. Doris Conley to show slides of her trip to Portugal and the Island of Madeira. The scenes and the flowers, especially the orchids, were beautiful to see. **Brompton Road** held a "Thank You" supper for their husbands for their help in serving tea and coffee at the card parties and at the banquets for which the WI ladies cater, and for the repairs that have to be done to the hall. Mr. Milton Brown, on behalf of the husbands, thanked the ladies for the delicious meal. The remainder of the evening was spent in playing cards. This sounds like a very pleasant evening. Two members from **Milby**, Mrs. J. Kirby and Mrs. R. Patrick reported on the very successful hot dish supper held at Huntingville Hall. The satisfactory proceeds will go towards a donation for the school fair program. At **Lennoxville** Mrs. Dorothy Geddes was presented with a Life Membership pin. The Home Economics convener held a clothing contest; the names were hidden in sentences, and 255 cancer dressings were turned in.

Other donations are: **Bury**, \$25 to Pope Memorial Student Loan Fund; **Frontier**, \$30 to Lachute Agricultural Society; **Denison Mills**, a donation towards school prizes; Cleveland, \$10 to CanSave, and **Belvidere** donated to the hot lunch fund at Lennoxville Elementary School.

Here are some roll calls: **Franklin Centre**, what is the best thing to bring to a person in hospital? **Hemmingford**, what does your husband think about the WI? **Frontier**, bring an article which you had made or grown last summer. **Upper Lachute-East End**, name the handiest cleaner in the house. **Brompton Road**, bring in a utensil or dish towel for the kitchen at our community hall, and **Lennoxville**, give your waist measurement in metric.

This motto comes from **East Angus**: Worry is today's mouse eating tomorrow's cheese. From **Fordyce**: the mediocre teacher tells, the good teacher explains, the superior teacher demonstrates, and the great teacher inspires. And Mark Twain said: "If you tell the truth you don't have to remember anything."

Gladys C. Nugent,
QWI Publicity.

MACDONALD JOURNAL

\$3.00 for 1 year

\$5.00 for 2 years

\$7.00 for 3 years

Outside Canada --

\$7.00 for 2 years

MACDONALD JOURNAL,
Box 237,
Extension Department,
Macdonald College, P. Quebec, H0A 1C0.

Please enter my subscription for years at a cost of

Name

Address

.....

.....

.....

Quebec Provincial Plowmen's Association

a farmer's association

- to promote good plowing and improved soil management**
- to provide in-field farm machinery demonstrations**
- to promote improved agricultural techniques and research in Quebec**
- to cooperate with government, agribusiness and universities to further the above objectives.**

Provincial Plowing Match and Farm Machinery Demonstrations

Provincial Agricultural Research Station, Deschambault

September 6, 7, 8 & 9, 1978

for further information contact:

Q.P.P.A. Box 237, Macdonald College, P.Q. H0A 1C0

Tel. 514-457-2000, loc. 261